

CLAIMS

What is claimed is:

1. A system, comprising:
power management logic;
an electrical load coupled to the power management logic and
configurable to operate in accordance with any of a plurality of
power states;
wherein, if an operating voltage for the system is between two thresholds,
the power management logic forces the electrical load to operate in
a reduced power state.
2. The system of claim 1 further comprising a pair of comparators coupling
the operating voltage to inputs of the power management logic, each comparator
having a reference voltage different from each other.
3. The system of claim 2 wherein a first of the two thresholds is about 15.5
VDC and the other threshold is about 14.5 VDC.
4. The system of claim 2 wherein the power management logic determines
whether the operating voltage is between the reference voltages.
5. The system of claim 1 wherein the system comprises a computer.
6. The system of claim 1 wherein the electrical load comprises a CPU
coupled to the power management logic and the reduced power state comprises
a reduced average clock frequency of a CPU clock.
7. The system of claim 1 wherein the electrical load comprises a display and
the reduced power state comprises a dimmed display.

8. The system of claim 1 wherein if the power management logic determines the operating voltage is above both of the two thresholds, the power management logic permits the system to operate in a full performance power state.
9. The system of claim 1 wherein if the power management logic determines the operating voltage is above both of the two thresholds, the power management logic permits the system to operate in any one of a plurality of power states.
10. The system of claim 9 wherein the power states are programmable.
11. The system of claim 8 wherein if the power management logic determines the operating voltage is below both of the two thresholds, the power management logic causes the system to operate in any one of a plurality of power states.
12. A system, comprising:
 - an electrical load configurable to operate in accordance with any of a plurality of power states; and
 - power management means coupled to the load for forcing the system to operate in a reduced power state when an operating voltage is between two voltage levels.
13. The system of claim 12 further comprising means for permitting the system to operate in any of a plurality of power states when the operating voltage is not between the two voltage levels.
14. The system of claim 12 wherein the means for forcing the system to operate in the reduced power state comprises means for reducing a clock frequency associated with a CPU in the system.
15. The system of claim 12 further comprising means for determining whether the operating voltage is between the two voltage levels.

16. A power management logic unit configured to operate in a system, comprising:

control logic that receives first and second signals, determines whether an operating voltage is between first and second reference voltages based on the first and second signals and, if so, causes the system to operate in a non-programmable, reduced performance mode.

17. The power management logic unit of claim 16 wherein the control logic determines whether the operating voltage is not between the first and second reference voltages and, if so, permits the system to operate in a mode that requires more power than the reduced performance mode.

18. A method, comprising:

comparing an operating voltage to a first reference voltage and to a second reference voltage; and

when the operating voltage is between the two reference voltages, requiring a system to operate in a less than full performance mode.

19. The method of claim 18 wherein the reference voltages comprise a first reference voltage and a second reference voltage and the first reference voltage is higher than the second reference voltage, and the method further comprises permitting the system to operate in a full performance mode when operating voltage is above the first reference voltage or below the second reference voltage.

20. The method of claim 18 wherein the reference voltages comprise a first reference voltage and a second reference voltage and the first reference voltage is higher than the second reference voltage, and the method further comprises permitting the system to operate in any one of a plurality of programmable modes only if the operating voltage is above the first reference voltage or below the second reference voltage.